

Feature	Osteoarthritis (OA)	Rheumatoid Arthritis (RA)	Juvenile Idiopathic Arthritis (JIA)	Suppurative Arthritis	Lyme Arthritis
Etiology	Degeneration of cartilage; aging or secondary to preexisting disease	Autoimmune; chronic inflammatory synovitis	Unknown; autoimmune mechanism similar to RA	Bacterial infection (hematogenous spread)	Infection with <i>Borrelia burgdorferi</i>
Age Group	>50 years	4th-5th decade (F:M = 3:1)	<16 years	Any age; children: <i>H. influenza</i> <2 years, <i>S. aureus</i> older children/adults, <i>N. gonorrhoeae</i> in young adults	Any age
Joints Affected	Few weight-bearing joints (knee, hip, spine, hands)	Symmetric polyarthritis (hands, feet, wrists, ankles, MCP, PIP joints)	Large joints > small joints; oligoarthritis more common	Mostly knee, but can affect other joints	Large joints (knees most common)
Pathogenesis	Cartilage degeneration > repair and proliferation	T-cell activation → IFN-γ, IL-17, TNF, IL-1 → synovial inflammation, cartilage destruction, bone resorption	Similar to RA but ANA seropositivity is common, Rheumatoid Factor usually absent	Direct bacterial infection causing purulent inflammation	Immune response to <i>Borrelia</i> infection
Clinical Features	Joint pain worsens with use, morning stiffness, crepitus, limited range of motion, osteophyte formation, radicular pain	Symmetric joint swelling, pain, warmth, stiffness in morning and after inactivity, ulnar deviation, systemic involvement (skin, heart, lungs, vessels)	Similar to RA, but systemic disease and large joint involvement more common	Acute onset of severe pain, swollen warm joint, fever, leukocytosis, ↑ ESR	Intermittent arthritis attacks, often after initial Lyme disease rash
Serology & Markers	None specific	RF+ (80%), ACPA+ (70%)	ANA+ common, RF- usually	↑ WBC, ↑ ESR, positive culture/gram stain	Positive Lyme serology
Treatment	Pain control (NSAIDs, intra-articular steroids), joint replacement for severe cases	Steroids, Methotrexate (MTX), Anti-TNF	Variable prognosis; treatment depends on severity	Joint aspiration + IV antibiotics	Antibiotics (e.g., doxycycline, amoxicillin)